

50. An article, comprising  
an composite portion comprising carbide particles in a binder;  
a etched surface portion substantially free of eta phase, the etched  
surface portion comprising unetched carbide particles and voids between the unetched  
carbide particles, wherein the voids extend to the unetched region; and  
a wear resistant coating on the etched surface portion and disposed in the  
voids.

51. The article of claim 50, wherein the voids have a depth of between about 3  
microns and about 15 microns.

52. The article of claim 50, wherein the composite portion comprises at least one of  
cemented carbides and cermets.

53. The article of claim 50, wherein the carbide particles comprise one or more  
material selected form the group consisting of:

a carbide material selected from the group consisting of tungsten carbide,  
titanium carbide, tantalum carbide, niobium carbide, vanadium carbide, chromium  
carbide, molybdenum carbide, and iron carbide;

a carbonitride of a refractory metal;

a nitride of a refractory metal;

a carbonitride of an element selected from the group consisting of W, Ti,  
Ta, Nb, V, Cr, Mo, and Fe;

an oxide of an element selected from the group consisting of aluminum, zirconium, and magnesium;

a boride of an element selected from the group consisting of aluminum, zirconium, and magnesium;

a material comprising molybdenum; and

a material comprising tungsten.

64. The article of claim 50, wherein the carbide particles comprise tungsten carbide and the binder comprises cobalt.

55. The article of claim 50, wherein the binder comprises one or more materials selected from the group consisting of cobalt, nickel, iron and elements within Group VIII or the periodic table, copper, tungsten, zinc, and rhenium.

56. The article of claim 50, wherein the coating enhances the wear resistance of the article and is comprised of one or more materials selected from the group consisting of TiC, TiN, TiCN, diamond,  $Al_2O_3$ , TiAlN, HfN, HfCN, HfC, ZrN, ZrC, ZrCN,  $Cr_3C_2$ , CrN, and CrCN.

57. The article of claim 50, wherein the coating is an MT-milling coating.

58. The article of claim 50, wherein the article is selected from the group consisting of metal cutting inserts, dies, punches, stamps, threading devices, blanking devices,

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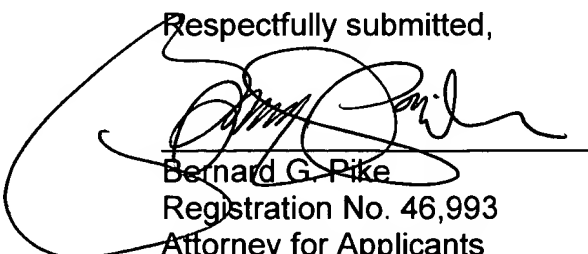
milling devices, turning devices, drilling devices, boring devices, mining bits, drilling bits, tricone bits, percussive bits, road planing devices, wood working bits, wood working blades, drawing devices, heading devices, back extrusion devices, rod mill roll devices, and wear parts used in corrosive environments; and the coating enhances the wear resistance of the article.

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**REMARKS**

The present Preliminary Amendment presents new claims drawn to an article. These claims replace the product by process claims previously being examined in the subject application. Applicants have amended the claims to article claims to clearly distinguish the claims from the articles of the prior art of record in the subject application. It is respectfully submitted that the claims as presented herein are fully supported by the application as filed. Applicants respectfully submit that the claims of the present application should be held patentable. Accordingly, passage of the claims to allowance at an early date is requested.

Respectfully submitted,



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